

# **The Gains from Trade, Protection, National Welfare and Trading Arrangements**

(World Trade and Payments, Chapter 2, 10 and 11, 14)

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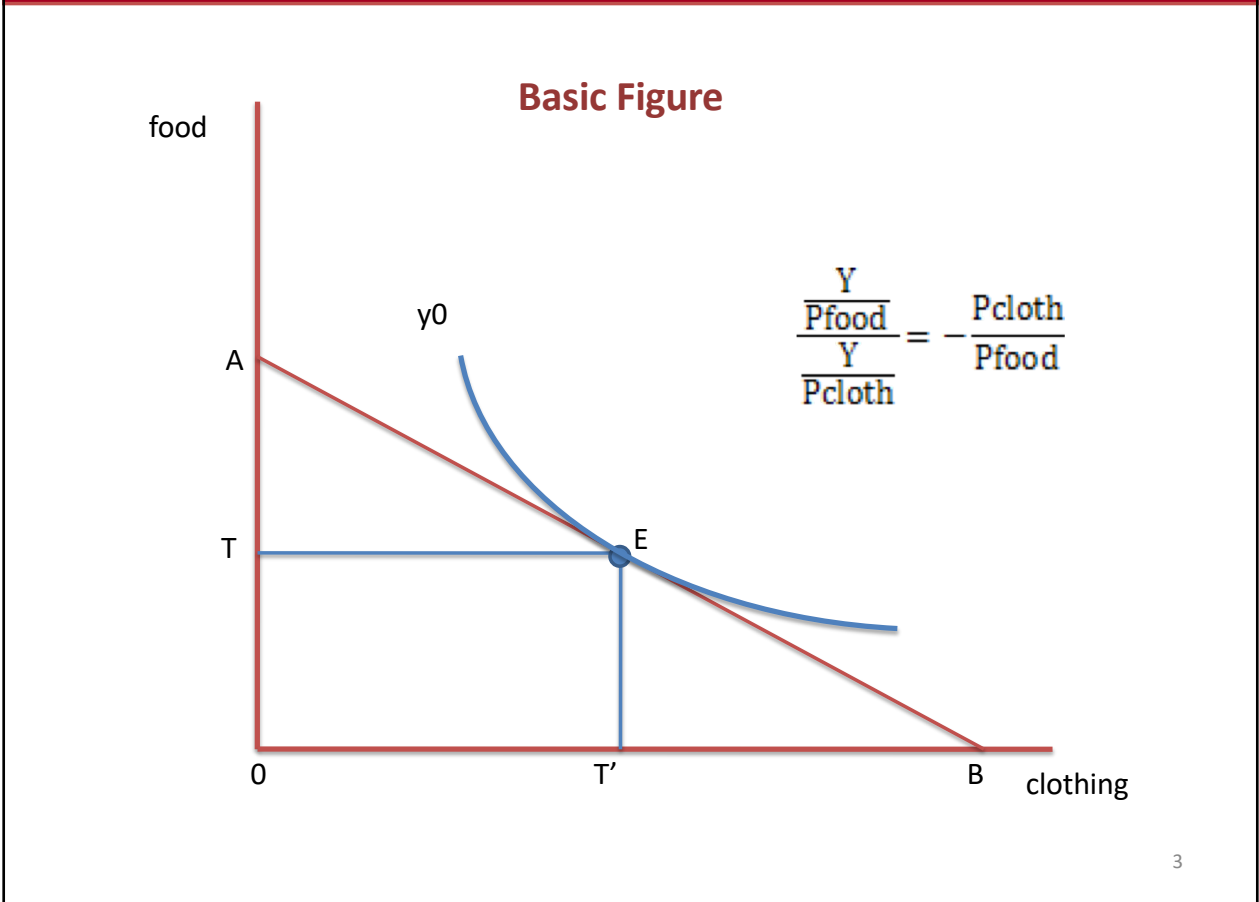
## **A. The Gain From Trade**

### **A1. Gain From Trade and Free Trade Equilibrium (No resource allocation)**

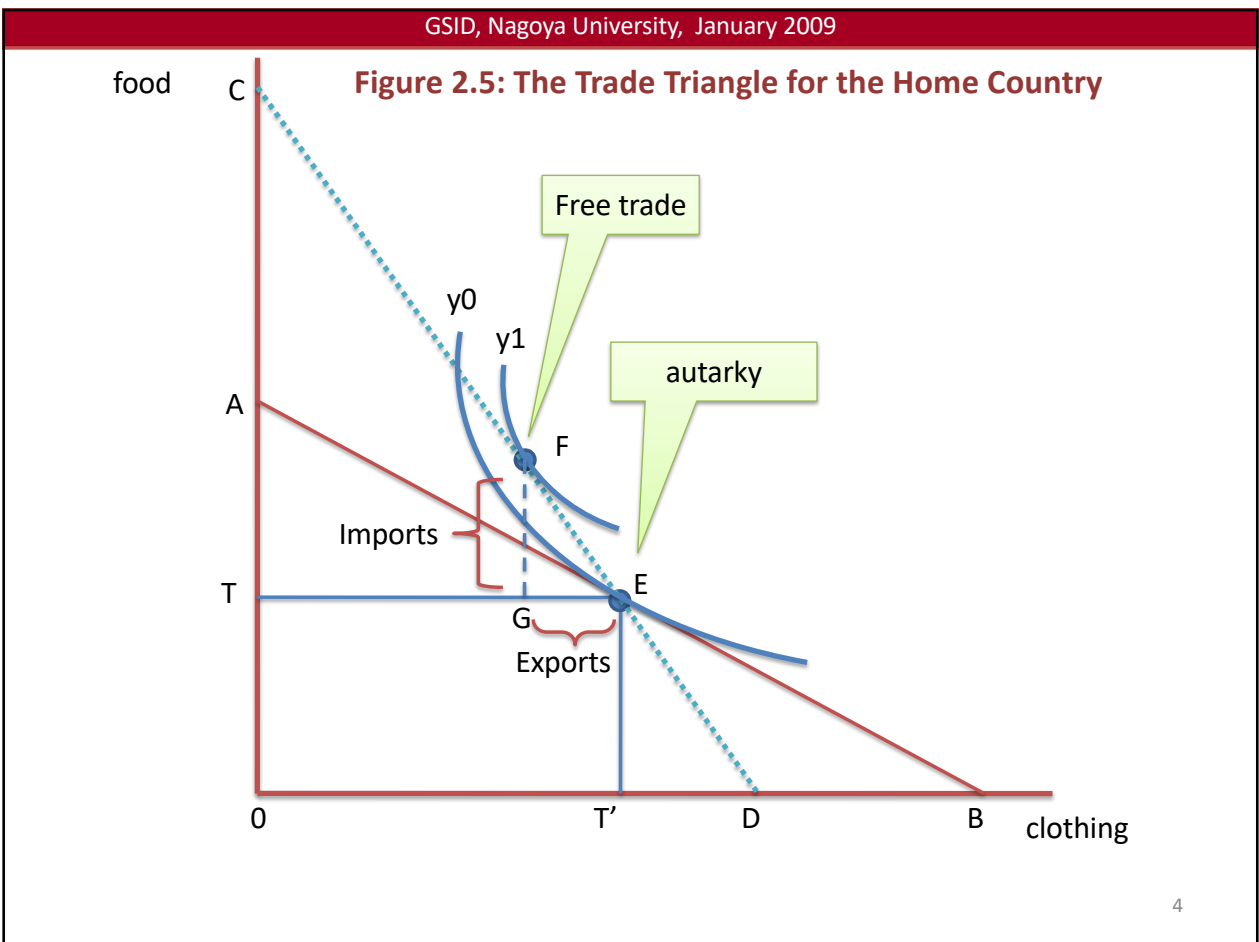
- Model of two countries and two commodities
- Two countries can have trade if they have differences in the relative price of commodities.
- A country has comparative advantage in a commodity if (in autarky) that commodity is relatively less expensive than in the other country.
- Comparison between autarky and free trade: the opportunity to trade at relative prices different from the home (autarky) must improve the real income at home. The consumption bundle under free trade is at the higher indifference curve (point F) than the autarky one (point E) in Figure 2.5. For foreign country, the consumption bundles are at point F\* (free trade) and E\* (autarky) in Figure 2.6.

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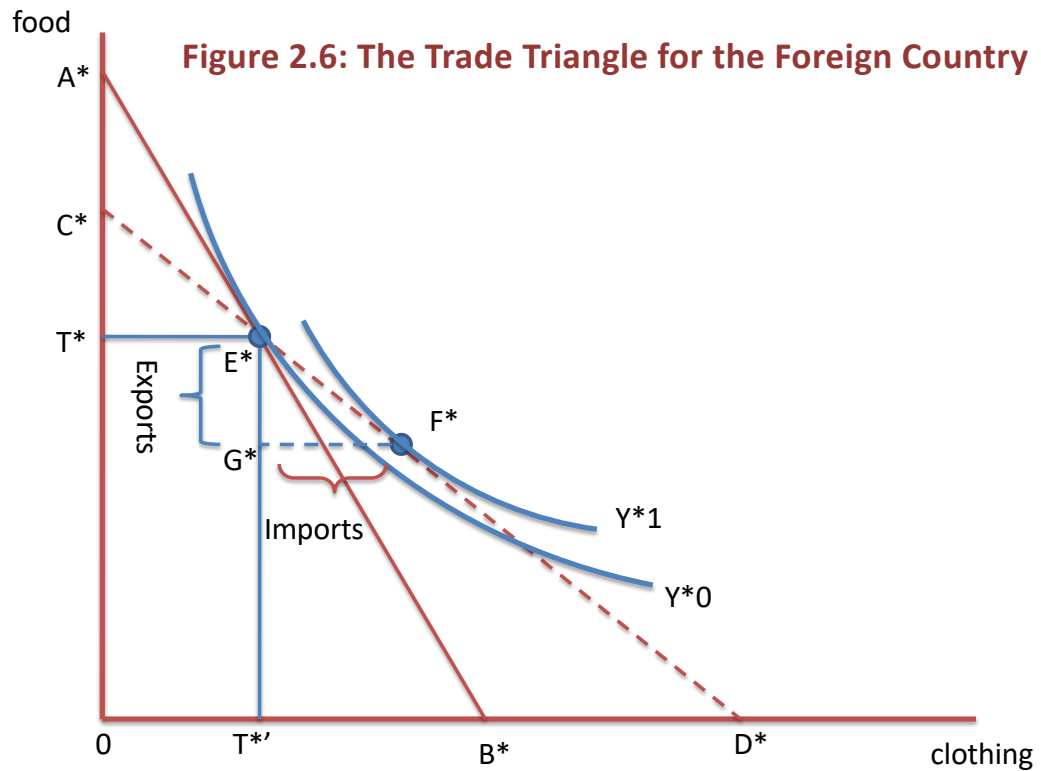
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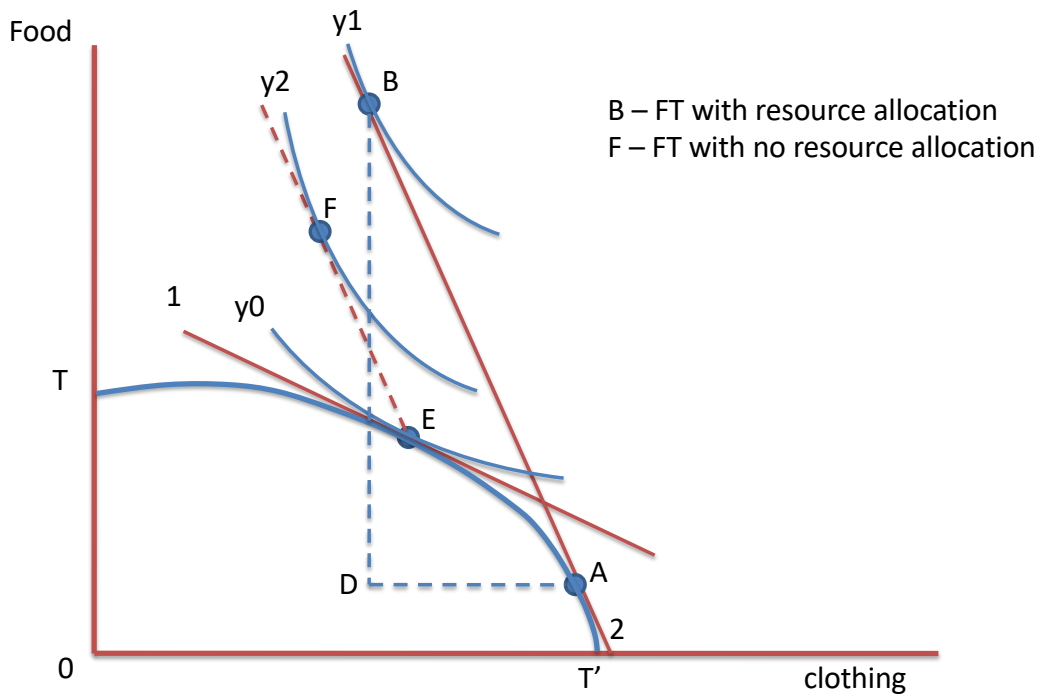
## **A2. Gain From Trade and Free Trade Equilibrium (With resource allocation)**

- Under free trade, there is a reallocation of production toward greater output of the commodity that has become higher priced in trade.
- The higher relative price of cloth (for home country) will encourage resources to move from food production into the clothing industry. For foreign country, it attracts the movement of resources from cloth to food industry.
- With the resources allocation, the trading countries can achieve higher welfare than that of without resource allocation (for home country is at point B under resource allocation and at point F without allocation) in Figure 2.7

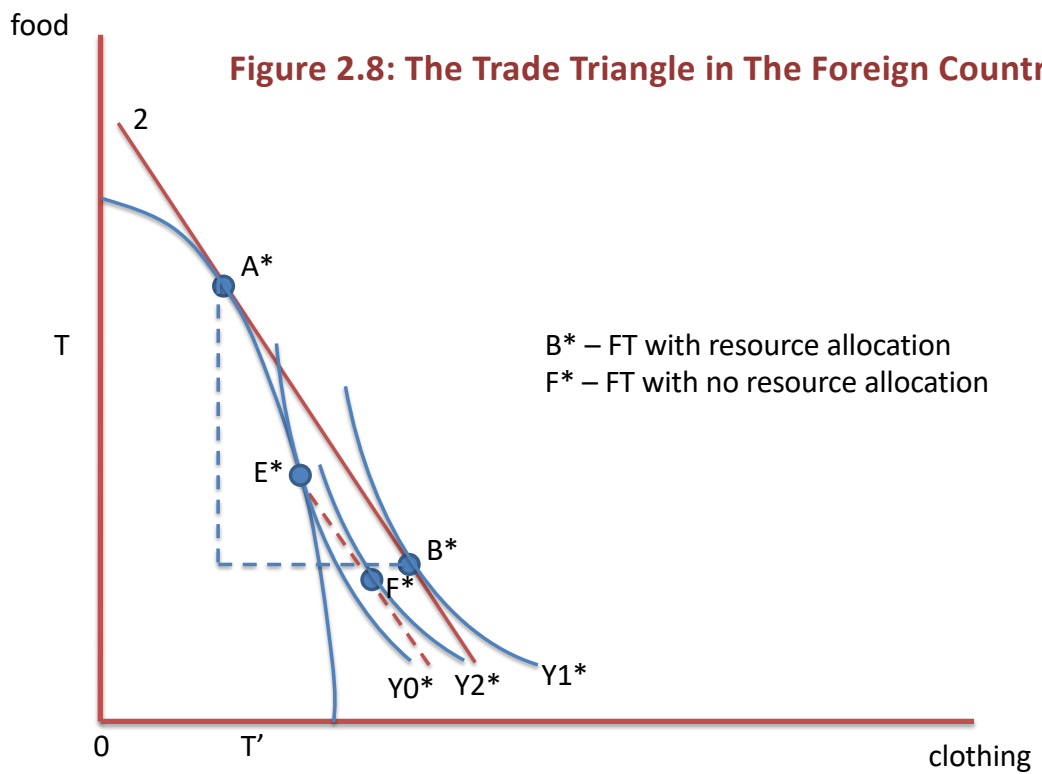
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**Figure 2.7: The Trade Triangle in the Home Country**



**Figure 2.8: The Trade Triangle in The Foreign Country**

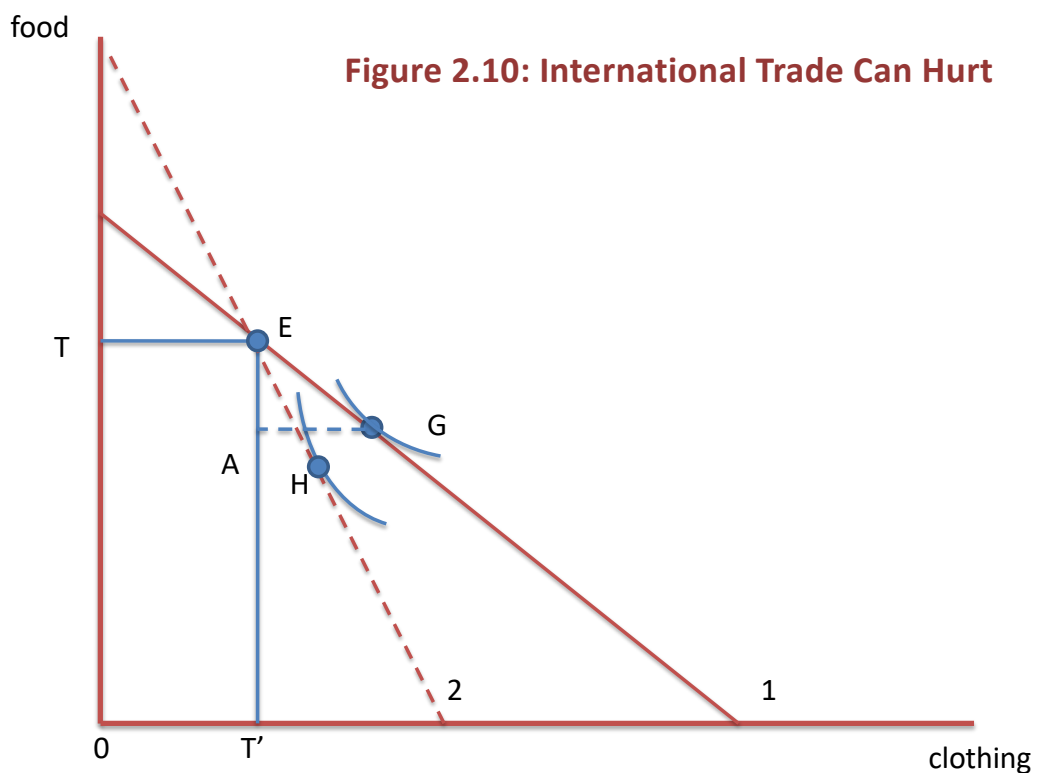


### A3. Winners and Losers: Autarky to Free Trade

- If country consists of individuals with different incomes or tastes, under the certain condition, free trade may hurt some people (see Figure 2.10).
- The losers are all the individuals who were net sellers of food at home before free trade. They face the lower price (after trade). While, the winner (net seller of exported product) face higher price (after free trade).
- There are winners and losers in the country. In the political context, they oppose each other.
- What's the solution?

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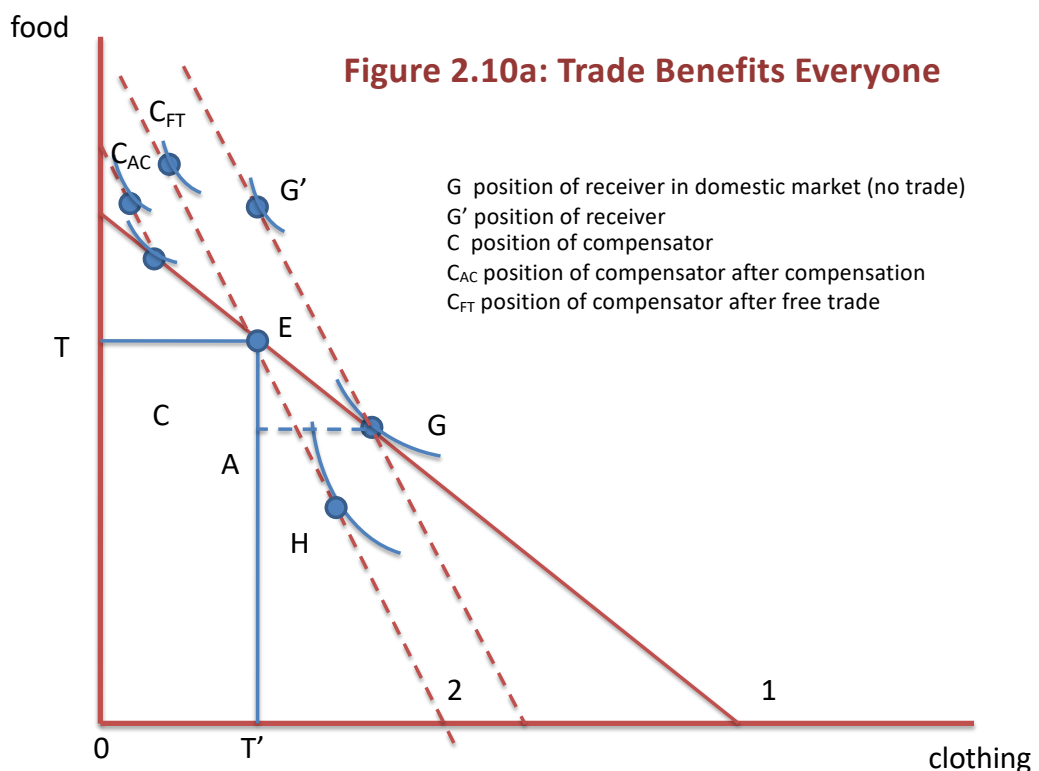
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## A4. Compensation Scheme

- The compensation scheme is designed to make all parties (winners and losers) can gain from free trade by the move (redistribution scheme).
- The losers can be compensated by those individuals who gain from free trade, by keeping them (the winners) are still better off after compensation.
- Redistribution scheme: switching the endowment point (from its original one) to the certain consumption point when internal trade (not free trade) is allowed (from E to G).
- Starting from G (compensated point), we enter the free trade. Then, the consumption bundle would be at point G' (everyone will be better off).

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## B. Protection and National Welfare

### B1. Protection by a Small Country

- Tariff: a tax on imported commodity.
- If the country is small, the tariff has no (little) effect on the world price. At home, producers (possibly support the tariff) and consumers face the higher price under the tariff regime.
- In general, tariff attracts resources to the protected sector and reduce the demand on imported products.

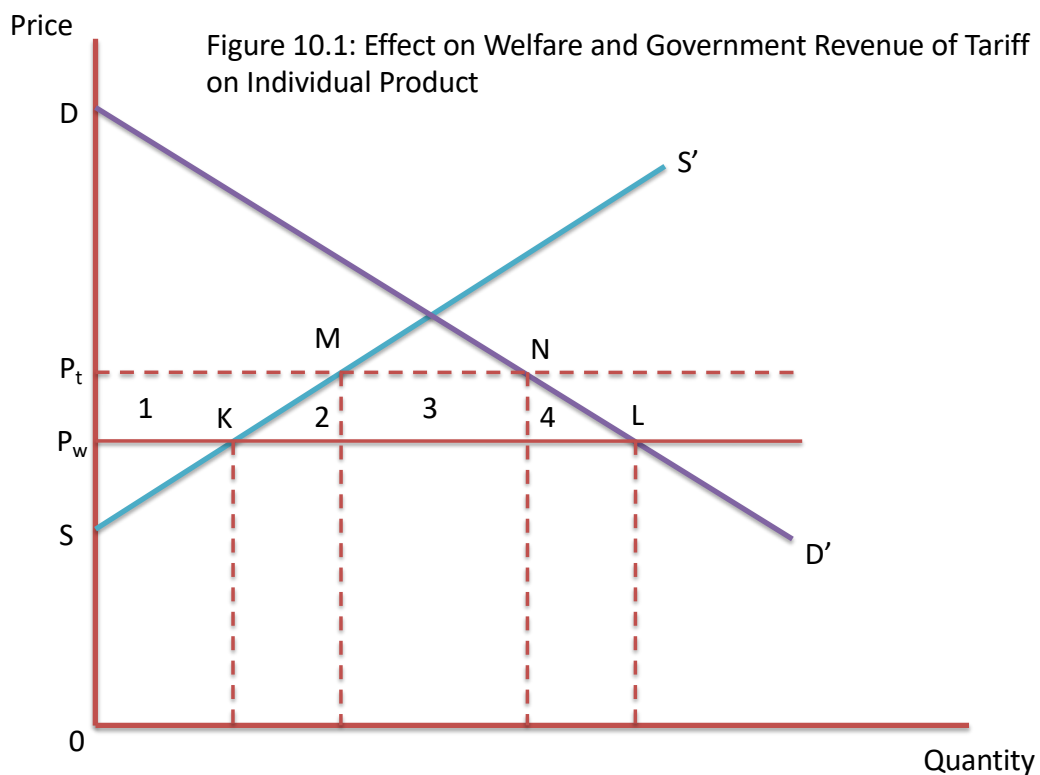
Please see Figure 10.1

Effects of tariff on welfare and partial equilibrium:

1. The reduction in consumer surplus (areas 1 + 2 + 3 + 4)
2. The increase in producer surplus (area 1)
3. The government revenue (area 3): as a tariff revenue
4. Dead weight loss (areas 2 and 4). No body can take it.

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## What about effects of tariff on production, demand and import?

### B1.1. Tariff and Production

- Tariff attracts resources to importing industry (food). Production move from A to B (Figure 10.4).

### B1.2. Tariff and Demand (Figure 10.3)

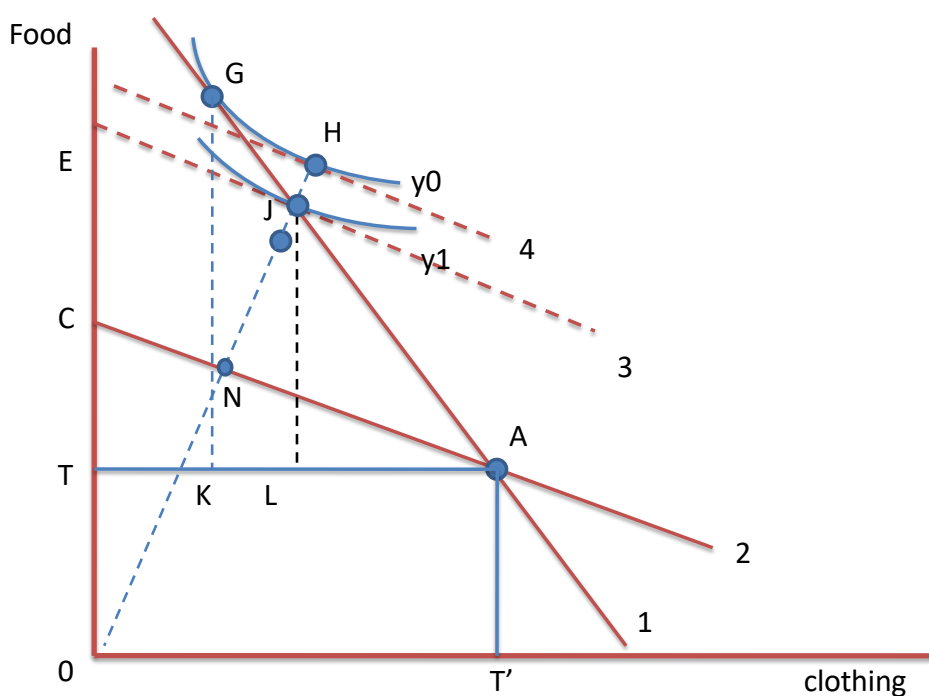
- Tariff reduce the country's demand for imports.
- Tariff does not only drive up the relative price of imported product (food) to consumers, but it also raises revenue (it is assumed: tariff revenue is redistributed back to the public).
- The consumption bundle is at point J instead of point H. Why?
- At world market price, the value of consumption must exactly match the value of production.

Tariff effect on demand is little bit complicated as: tariff revenue is part of income and income is one of determinants of the demand for imports. To solve it, there are two requirements:

- The indifference curve must lie down on the budget line (reflects domestic prices)
- The value of consumption must match the value of production

Tariff raises revenue but it lowers real income

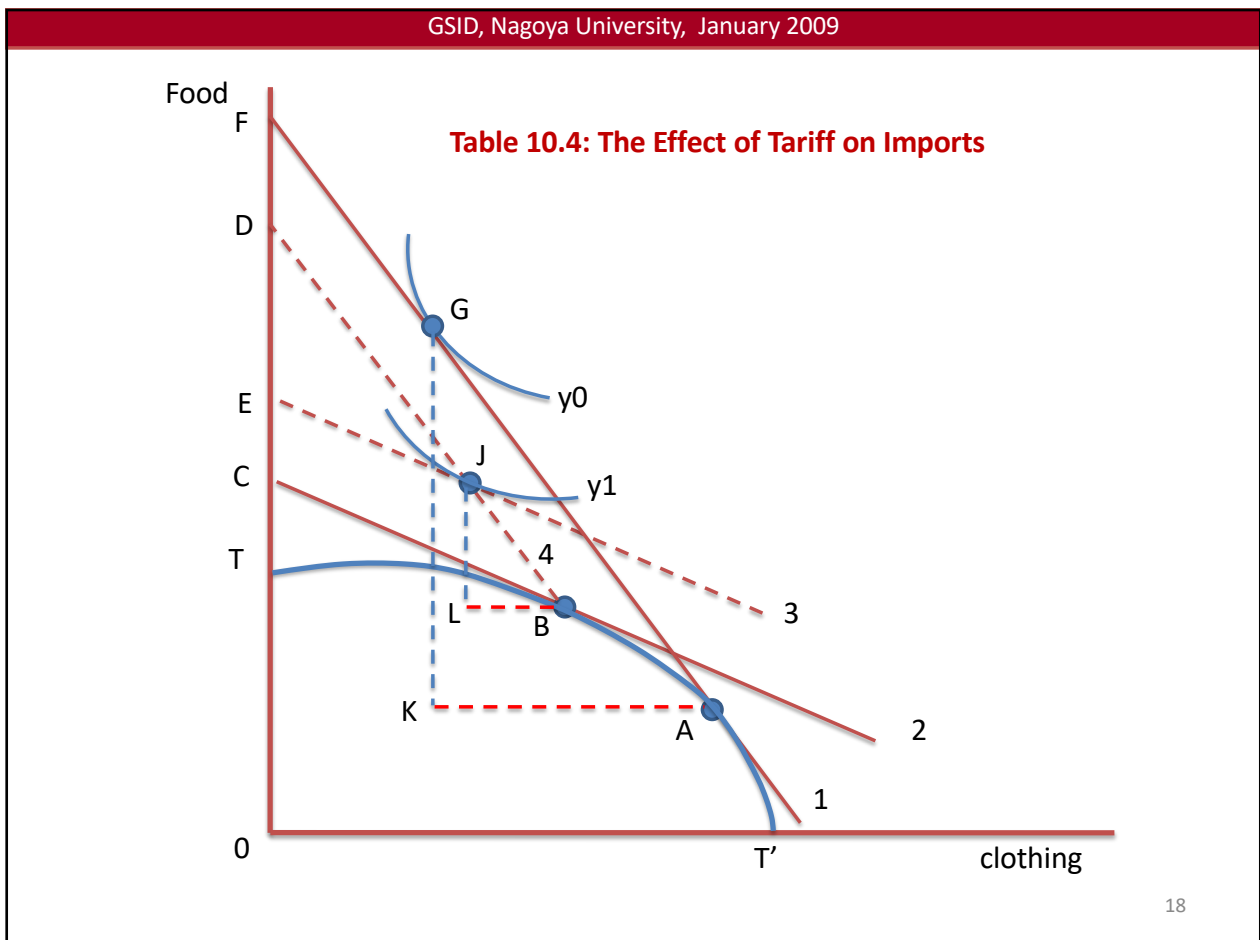
Table 10.3: The Effect of Tariff on Demand





**B1.3. Tariff and Imports (both effects of production and demand)**

- Country's import reflects both demand for imported products and domestic production (see Figure 10.4). The free trade equilibrium of production and consumption are presented at point A and G respectively.
  - The home country's demand reduced from GK to JL (the reflection of greater production and lessened demand for food).
  - Production point move from A to B and consumption bundle
- ※ Tariff lowers real income (the move from  $y_0$  to  $y_1$ )
- At given world price, tariff lowers the aggregate value of production (compare OF with OD)
  - Point J is not even the best consumption point along the world price line (line 4).



## B2. Protection (Country's Size)

A country is categorized as big or small depends on its capability to influence the international market prices. The relative size of a country can also be recognized from its average factor endowments.

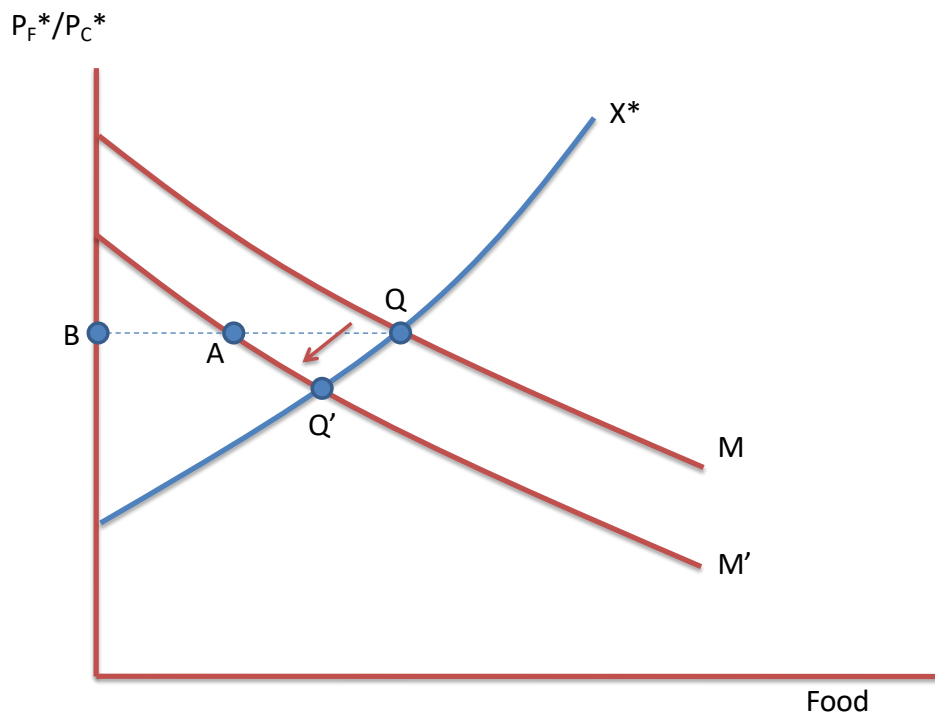
Theoretically, small developing economies tend to be price takers in international markets as they face a given world price. So, they cannot control their terms of trade independently. They should strive for free trade in favor of large countries.

Under classical economic theory small country without any distortions in its economy could maximize welfare under free trade (it assumes perfect certainty in prices, profit maximization, full employment).

The small open country should pursue zero trade tax regimes when there is no domestic market distortion. The existing trade tax tends to decrease the volume and gain from trade. Even though, setting up trade tax may improve welfare in the short run, but in the long run it may reduce economic welfare

Tariff, at any given TOT, would cut back home demand for imports (from Q to A in Figure 10.5)

- If the tariff-levying country is large in relation to competitive world markets, tariff can improve a country's term of trade (TOT). This is because its tariff will drive down the imported products, then it will cut back the world relative price of imports. Equivalently, it raises the relative world price of its exports. The new equilibrium is at point Q' (Figure 10.5).
- Improvement in TOT comes from either a reduction in the world relative price of imports or an increase in the relative price of exports.



21

21

### How do developing countries (a small countries) get benefits from free trade when they are facing, for example, high unemployment?

When unemployment exists, small country could depart from free trade condition. Unemployment exists especially in the import sector. This is because the prices of factor of production (wages) in the domestic country are inelastic as most of the factor productions do not deal under short term agreement.

Protection can cure the adverse effects of declining foreign prices on domestic unemployment by applying tariffs or quotas as second-best policies. For the unemployment problem, the country can set a production subsidy policy, which is better than tariffs or quota.

A certain country under the certain condition of, for example, the limited national budget and small contribution of the industry may prefer tariffs as a trade policy. This is because tariffs can be a source of revenue for government, and it is most common in international trade issues.

22

22

## C. The Political Economy of Protection

### C.1 Protection for Raising Revenue

-Zero tariff means no revenue (from trade sector).

Tariff as a source of national revenue and protection was applied by the US in nineteenth century (Choi and Lapan, 1991)

-Once the peak tariff is exceeded, the higher tariff means the less revenue and fall continuously to zero.

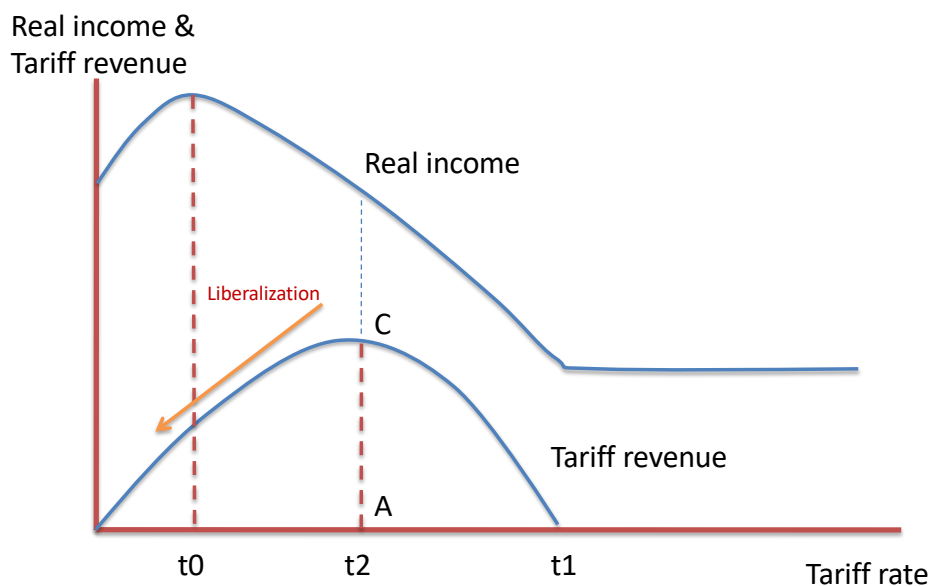
-Optimal tariff gives the highest real income

-Reduction in tariff rate raises the real income (tariff revenue as well). In the liberalization, the reducing tariff revenue does not mean the loss in real income when the tariff cut is conjunction with reducing trade barriers in foreign countries (market access/increasing export)

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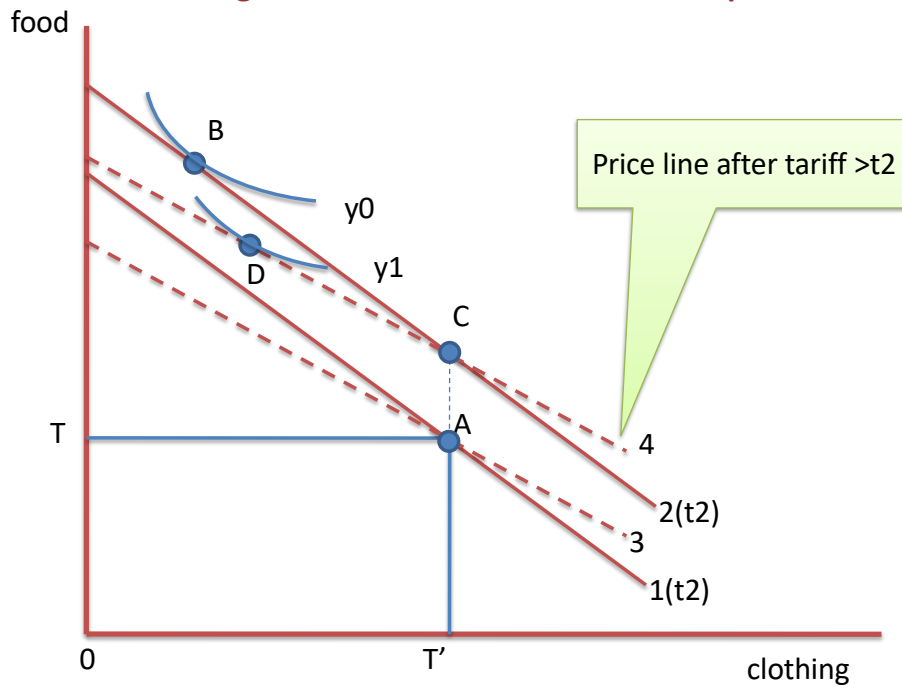
Figure 11.1: Protection and Revenue



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Figure 11.2: Max.Revenue Tariff &gt; Optimal Tariff



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## C.2 First vs. Second Best Policy

The theory of the second-best (Richard Lipsey and Kelvin Lancaster, 1956) focuses on what happens when the optimum conditions are not satisfied in an economic model.

Perfect market  $\longrightarrow$  equilibrium (first best)

(The best government policy is no intervention-laissez-faire). w.r.t free trade, the optimal policy is free trade.

The real world is not in the perfect condition.

Distortion in market  $\longrightarrow$  equilibrium (second best/less efficient)

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### What is the optimal policy for second-best equilibrium situation?

The first-best policy- the ideal or optimal policy choice in the presence of a particular market distortion or imperfection

The second-best policy - any such policy raises welfare to a lesser degree than (inferior to) the first-best policy.

**Trade policies** (policies designed to directly affect the flow of goods and services between countries): such as tariffs or export taxes

**Domestic policies** (directed at a particular activity that occurs within the country but is not targeted directly at trade flows): such as production subsidies or consumption taxes

(WTP book uses **commercial and non commercial policy**)

27

27

### C3. Tariff and Other Policy Instruments

The application of the policies depends on the policy objectives:

#### 1. Production Goals

Background: under free trade, the level of production is too low. What is the best policy? Tariff or production subsidy?

Objective: greater domestic production

See Figure 11.3a

Production subsidy ends with the higher welfare than tariff does.

#### 2. Consumption Goals

Background: government wish to restrict the unnecessary luxury products

Objective: less consumption on specified product

See Figure 11.3b

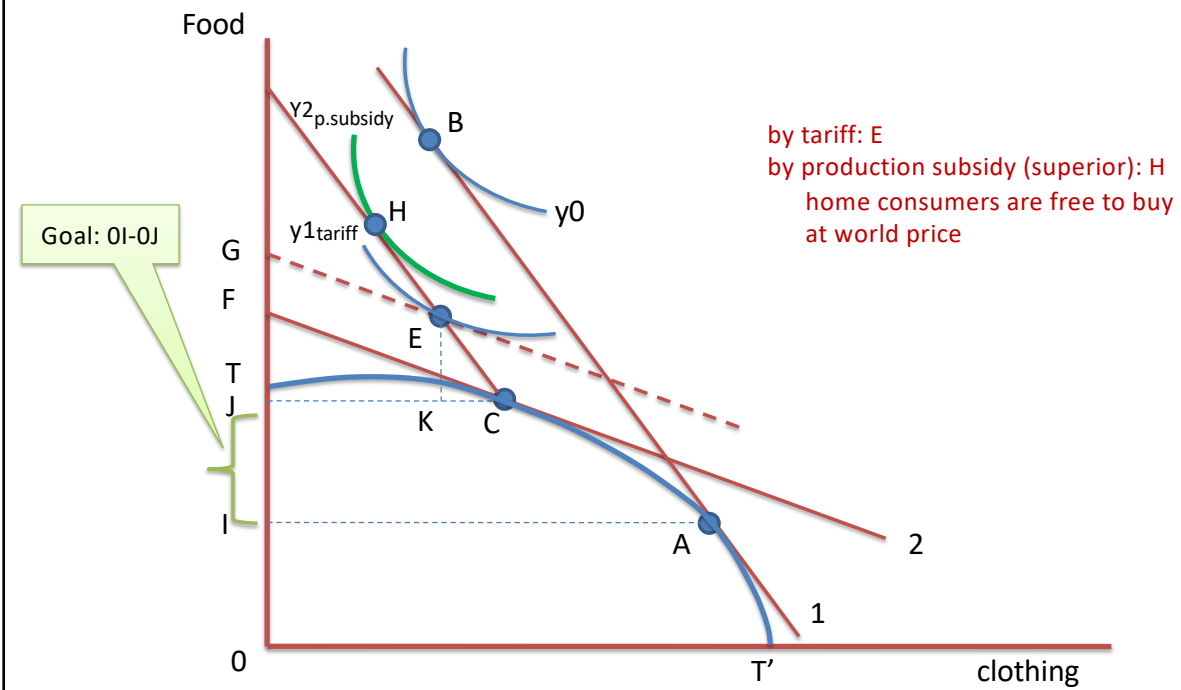
Consumption tax raises the domestic price to consumers but not the producers (still facing free trade price)

Tariff raises the domestic price to producers and consumers, encourages transfer of domestic resources away from exportable products toward more expensive/the luxury products. Production of exportable products is reduced (contracted).

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Figure 11.3a: Tariff vs. Production Subsidy (Production Goal)



**Consumption Tax:**

- Raise the price to consumers above the world level, but leaves the producers to face world competition at world price.

**Tariff:**

- Raise the domestic price to consumers as well as producers.
- Encourage a transfer of domestic resources away from exportable products and toward production of the luxury items.

For simplicity:

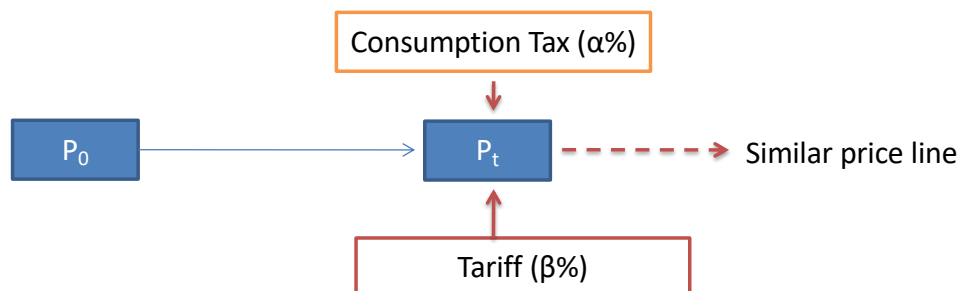
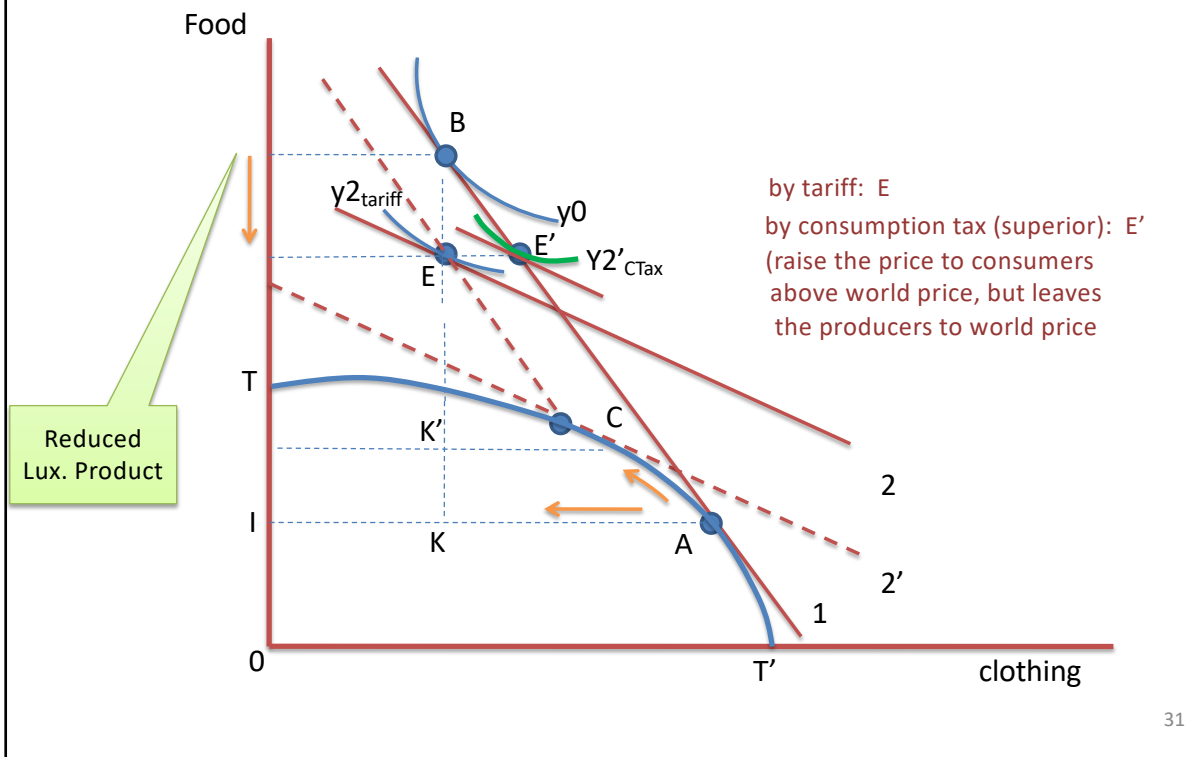


Figure 11.3b: Tariff vs. Consumption Tax (Consumption Goal)



31

### 3. Domestic distortions and environmental considerations

- Market price is not always perfect indicator of social cost and benefit (case of monopoly or externalities in production or consumption), such as export of polluted products.
- Trade restriction (through tariffs) is second best policy. The direct policy through production tax is superior (first best) to tariffs.
- Case of too low-wage labor than it should be. The direct transfer is first best policy.

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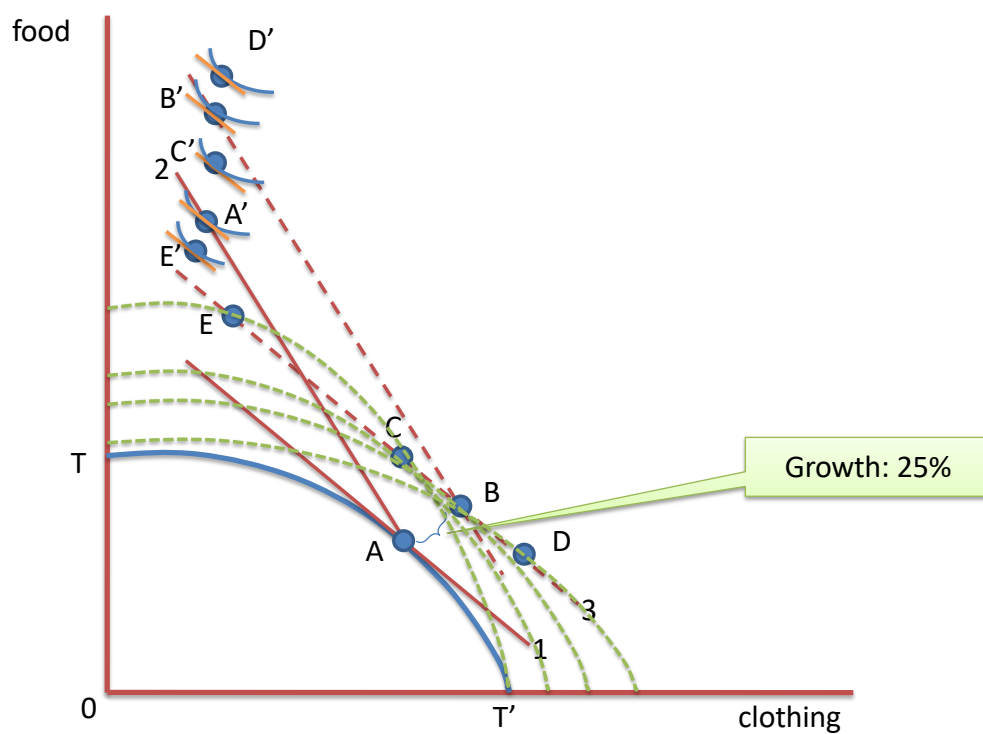
**C4. Growth, Protection and Welfare**

- Growth can increase welfare
- If more resources devotes to the protected import-competing sector, in extreme case, growth at home could even result in a loss of welfare. See Figure 11.4.
- Protection attracts Foreign Investment

**C5. Protection and Unemployment**

Tariff will be a second-best policy to correct the unemployment imperfection. The first-best policy would be a policy targeted more directly at the unemployment such as production subsidy and adjustment assistance to workers.

**Figure 11.4: Growth with Protection**



## D. Preferential Trading Arrangements

Preferential Trading Arrangements (PTA): a group of countries agree to eliminate trade restrictions among themselves while maintaining them against the outside world (rest of the world).

It is discriminatory but allowed as an exception to the GATT Rule the (the WTO principle of Article XXIV).

It is common that the involving countries are neighboring countries, sharing borders or continent, and often with common ties of culture/language.

The common types of Trade Preferences:

1. Free Trade Area: Members eliminate tariffs among themselves but keep their original tariffs against the rest of the world.
2. Customs Union: Members not only eliminate all tariffs among themselves but also form a common tariff against rest of the world.
3. Common Market: Members proceed beyond a custom union to eliminate restrictions on movements of factors of production among themselves.
4. Economic Union: Members proceed beyond a common market to unify their fiscal, monetary and socioeconomics policies.

Two faces of PTA: distortion and liberalization.

Welfare impacts in two forms:

1. Trade creation
2. Trade diversion

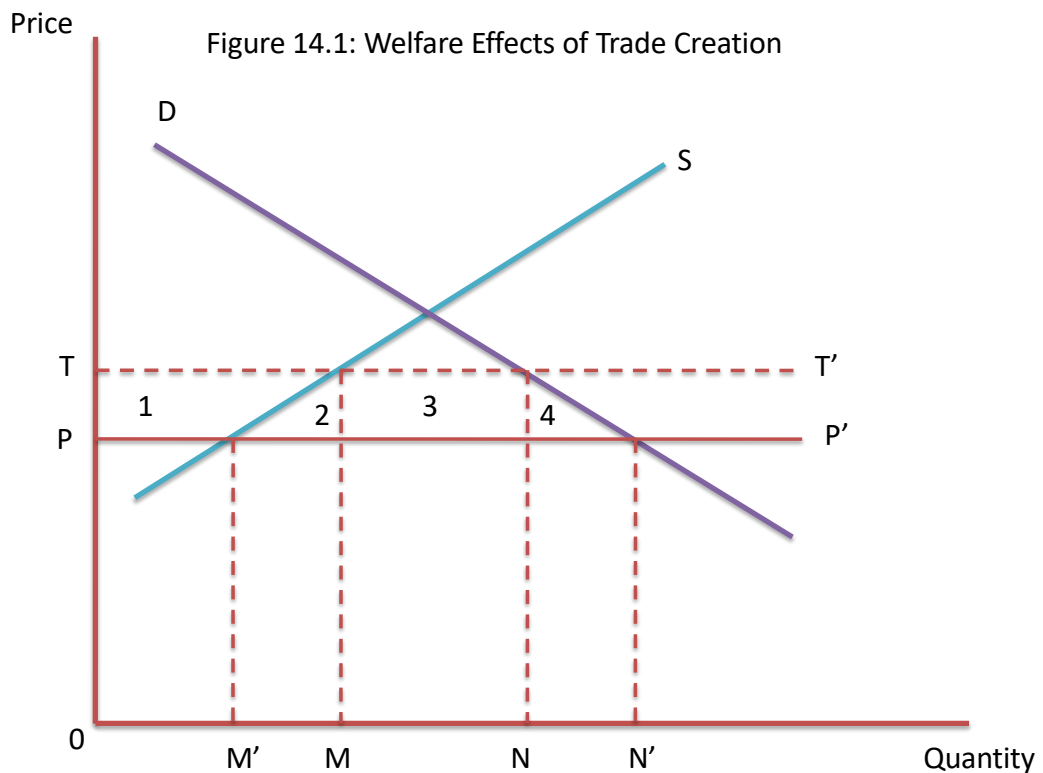
Jacob Viner (1950): the PTA could either improve or worsen allocation, by leading either to trade creation or trade diversion.

*Trade creation* refers to the extent to which preferential trading arrangements create and further expand new opportunities for trade between countries. In terms of production it can be recognized as imports from the regional partners that displace higher-cost domestic production in given countries. *Trade diversion* refers to the extent of distraction of existing trade flows among countries in the region in which the regional agreement exists.

In Viner's criteria, a preferential trading arrangement will always be welfare-enhancing to the global trading system as long as trade creation exceeds trade diversion.

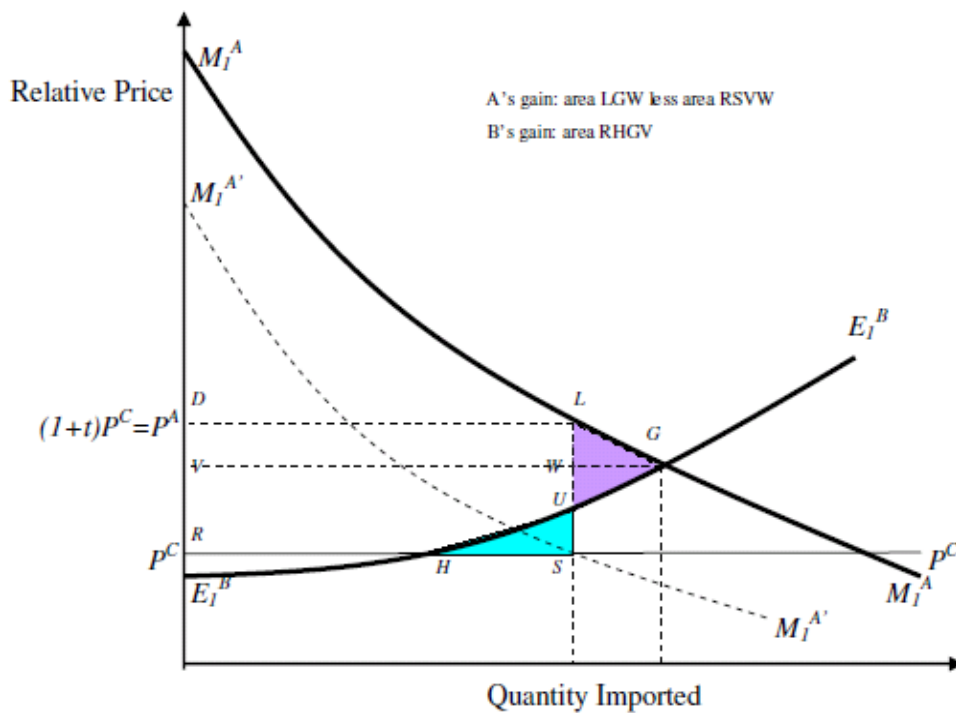
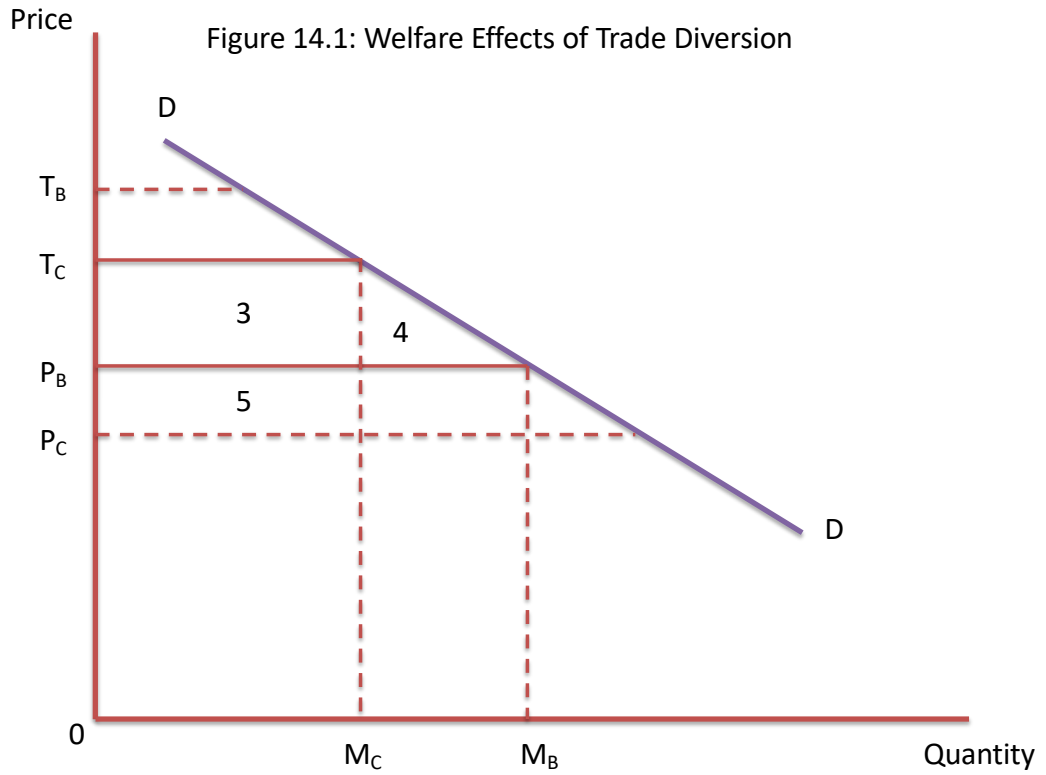
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Source: de Melo, Panagariya and Rodrik (1993, p. 162).